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**United States Court of Appeals
for the Federal Circuit**

KOSS CORPORATION,

Appellant,

— v. —

KATHERINE K. VIDAL, Under Secretary of Commerce for Intellectual
Property and Director of the United States Patent and Trademark Office,

Intervenor.

*Appeals from the United States Patent and Trademark Office, Patent
Trial and Appeal Board in Nos. IPR2021-00305 and IPR2021-00381*

**REPLY BRIEF FOR APPELLANT
KOSS CORPORATION**

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I. NO SUBSTANTIAL EVIDENCE SUPPORTS THE BOARD'S DETERMINATION THAT CLAIM 1 OF THE '325 PATENT IS UNPATENTABLE

This Court should overturn the Board's determination that claim 1 of the '325 Patent is unpatentable. The Board inappropriately concluded that Rosener "*expressly* describes" and "*expressly* teaches" the claimed earphone form factor having an earbud and a curved hanger bar. Appx23–24 (emphasis added). As a direct result of this erroneous factual conclusion, the Board did not contemplate whether the claimed earphone form factor would have been obvious in view of Rosener (and/or Hankey and/or Dyer). Such analysis would have necessitated the consideration of the expert testimonies provided by Koss's expert, Mr. Nicholas S. Blair ("Blair"), and Petitioner's expert, Jeremy Cooperstock, Ph.D. ("Cooperstock"), which the Board failed to do. *See* Appx23 ("We need not evaluate which of the experts' views on the various forces on a Figure 4/5 combination would have been correct."). Had the Board not made an erroneous factual finding that allowed it to avoid weighing the competing expert testimonies, the Board would have found Blair's testimony on the issue of Rosener's Figure 5 earphones being adaptable to include curved hanger bars as set forth in the Petition (*see* Appx243) significantly more compelling than Cooperstock's testimony at least given Blair's superior expertise on the issue.

A. No Reasonable Mind Would Accept the Evidence Relied Upon by the Board as Adequate to Support the Board’s Determination that Claim 1 of the ’325 Patent is Unpatentable

Koss’s opening brief explained how the Board made factual errors in concluding that claim 1 of the ’325 Patent would have been obvious. The primary factual error included that Rosener “expressly describes” the claimed earphone form factor having an earbud and a curved hanger bar. Opening Brief (“OB”), Dkt. 20, at 36–37. Koss’s opening brief also explained why this error was non-harmless. The error allowed the Board to bypass the operative question of whether the claimed earphone form factor would have been obvious in view of Rosener (and/or Hankey and/or Dyer). In failing to consider this question of obviousness, the Board failed to evaluate the testimonies of Blair and Cooperstock. *Id.* at 38–41.

Rosener’s ¶ [0030] describes various forms that the earphones 502, 504 depicted in Rosener’s Figure 5 could take. Appx1419–1420. Rosener’s ¶ [0030] uses different and particular prepositions to describe how each specific earphone form factor interacts with a user’s ear. The Director disputes Koss’s reading of the literal words of Rosener as an unduly narrow and unreasonable “grammatical technicality.” Brief for Intervenor—Director of the United States Patent and Trademark Office (“Director Br.”), Dkt. 23, at 23. The Director’s characterization of Koss’s position as a “grammatical technicality” serves as an implicit admission

that, when read in a grammatically technical manner, Rosener does not “expressly” describe the claimed earphone form factor. “Expressly” means “explicitly.” *See Coryell v. United States*, 855 F. Supp. 1120, 1122 (C.D. Cal. 1994). “Explicitly” means “[i]n a clear and detailed manner, leaving no room for confusion or doubt.” *United States v. Taylor*, Case No. 16-cr-143-pp, 2018 WL 1014089, *5 (E.D. Wisc. Feb. 21, 2018) (quoting Oxford English Dictionary). No reasonable mind would accept that the literal words of Rosener’s ¶ [0030], under a “grammatically technical” reading, describe clearly, in a detailed manner with no room for doubt or confusion, an earphone having an earbud and a curved hanger bar.

More specifically, ¶ [0030] makes specific reference to Rosener’s Figure 5, which depicts a pair earphones 502, 504, each having a wireless form factor including a housing (or body portion) and an earbud. Appx1408. Notably, Rosener’s Figure 5 earphones 502, 504 do not include a hanger bar or an earloop.¹ Rosener’s ¶ [0030] explains that the earphones depicted in Figure 5 could adopt a variety of form factors, i.e., “an earbud designed to fit into the concha of the pinna of the user’s ear; a canalphone, which can be fitted within the ear canal of the user’s ear; an over-the-ear circum-aural type headphone; or any other suitable configuration that may be attached to, worn on, or fitted within the user’s ear.”

¹ The Board concluded that the earloop 404 in Rosener’s Figure 4 headset constitutes the “curved hanger bar” of claim 1 of the ’325 Patent. Appx20, n. 4.

Appx1419. This sentence carefully employs different and particular prepositions to detail the orientation of an earphone with respect to a user's ear for each specific form factor type. The earbud and the canalphone are described as fitting "into" and "within" the user's ear, respectively, while the circum-aural earphone—such as shown in Rosener's Figure 4—is described as fitting "over" the ear. Rosener's description of a circum-aural earphone as fitting over—and not "into"—the user's ear is consistent with the evidence in this case that a circum-aural type earphone does not have an earbud that is inserted into the user's ear. Appx4067, ¶ 42; Appx2942.

Continuing the discussion of earphone form factors, the next sentence in Rosener's ¶ [0030] states that the earphones 502, 504 "may further include a clip, earloop, or other suitable securing mechanism to help maintain the earphone ... on the ear of the user." Appx1420. As Rosener explicitly associates the clip, or earloop, as being intended to maintain an earphone "*on*" a user's ear, such a securing mechanism is not intended for use with earbud and canalphone form factors, which are, according to Rosener, fitted "into" or "within" the user's ear.

Additionally, the Director implies that the location of ¶ [0030] within Rosener's Detailed Description gives the words of ¶ [0030] less significance, without citing to any legal support for such an assertion. Director Br. at 23. Indeed, the text itself of a specification, rather than the position of text within the

specification, is important in assessing what a patent specification discloses. *See e.g. Markman v. Westview Instruments, Inc.* 52 F.3d 967, 978 (Fed. Cir. 1985) (en banc) *aff'd* 517 U.S. 370 (1996) (a “patent is a fully integrated written instrument”). To that end, there is no evidence in the record that the position of Rosener’s ¶ [0030] within the entirety of Rosener’s specification implies that the ¶ [0030] disclosure is generic, all-encompassing, or otherwise different from what ¶ [0030] literally states. Still further, the Director’s contention that the words of ¶ [0030] are meant “to show how the claimed invention can be used in any type of wireless earphone” (Director Br. at 23) misses the mark because the scope of Rosener’s claims is irrelevant to the *inter partes* review of Koss’s patent.

Koss’s “grammatically technical” interpretation of the literal words of Rosener is bolstered further by Rosener’s Figure 4. Notably, the only earphone form factor shown in Rosener as having an earloop is shown in Figure 4, which depicts a single, over-the-ear circum-aural headset. Appx1407; Appx1419, ¶ [0017]. The headset depicted in Rosener’s Figure 4 is consistent with the form factor teachings of Rosener’s ¶ [0030], where only earphones that fit “on”—not “into” or “within”—the ear are envisioned as having an earloop. And earphones that are positioned “on” the user’s ear, like shown in Rosener’s Figure 4, do not have an earbud that is inserted into the user’s ear according to the evidentiary record in the IPR. Appx4067, ¶ 42; Appx2942.

In arguing that the Board’s findings are consistent with the manner in which Koss’s expert, Mr. Joseph McAlexander III (“McAlexander”), understood Rosener, the Director misconstrues McAlexander’s statements by selective quotation. If anything, McAlexander’s testimony bolsters Koss’s position that Rosener lacks explicit disclosure of the claimed earphone form factor.

McAlexander testified that Rosener’s ¶ [0030] indicates “that in some forms you may use [the earloop], in some forms, you may not.” Appx2881 at 81:18–21.

McAlexander’s testimony bolsters Koss’s contentions that Rosener does not explicitly describe the claimed earphone form factor as McAlexander expressed that “Rosener [is] very deficient on how much he provided information about those limitations” and that Rosener is “very much light on his explanations.” Appx2888 at 88:8–11. McAlexander further testified that a POSITA “would not combine something that lacks utility or would not work or would actually counter the quality of the sound ... because the whole thrust of this is the sound quality and the noise ...” (Appx2949 at 149:7–16) and that putting an earloop on Rosener’s Figure 4 headset would “generate forces that will tend to dislodge [the earphone] and will disrupt the quality of the listening.” Appx2951–2952 at 151:22–152:1. For that reason, as McAlexander testified, a POSITA would not have found it obvious to add an earloop to Rosener’s Figure 4 headset. Appx2952 at 152:3–21; *see also* Appx4064–4066, ¶¶ 39–41.

For at least these reasons, no reasonable mind would accept the literal words of Rosener as adequate to support the Board’s determination that Rosener “explicitly describes” the claimed earphone form factor having an earbud and a curved hanger bar.

As the Board should have determined, Rosener lacks an explicit disclosure of the earphone form factor recited in claim 1 of the ’325 Patent, in which case the Board should have also considered the testimonies of Blair (and McAlexander) and Cooperstock in assessing whether the claimed earphone form factor would have been obvious in view of Rosener (and/or Hankey and/or Dyer). Had the Board considered such evidence, the Board would have found Blair’s testimony on this issue significantly more compelling than Cooperstock’s testimony. *See* OB at 38–40.

No reasonable person would accept Cooperstock’s testimony over Blair’s testimony as Cooperstock does not possess any meaningful earphone design and/or development experience. OB at 40–41. While Cooperstock designed a single pair of earphones in the “early 1970s” (Appx4260–4261), “a significant focus” of Blair’s professional career has been the design of earphones. Appx4126, ¶¶ 1–4. As described in Koss’s opening brief, Blair testified that adding an earloop to the earphones 502, 504 depicted in Figure 5 of Rosener as asserted in the Petition (Appx243) would work to pry the earbud out of the user’s concha (i.e., the bowl-

shaped cavity just outside the opening of the ear canal). OB at 39–40 (citing Appx4135–4136). The forces resulting from the addition of the earloop to the earphones 502, 504 as asserted in the Petition “would lessen the sound quality characteristics of the earbud and result in earphones that are uncomfortable for the user.” Appx4135–4136, ¶ 16. For at least this reason, a POSITA would not be motivated to add an earloop to the earbud-downwardly extending member depicted in Rosener’s Figure 5. Simply put, a POSITA would not be motivated to modify an earbud, like Rosener’s Figure 5 earbud, in a way that would worsen the performance of the earbud, e.g., by displacing it from the user’s concha, where it is intended to be positioned. Appx4064–4066, ¶¶ 39–41.

The Director further contends that the Board properly held Petitioner’s “annotated Figure 5 was not intended as a proposed physical combination of different embodiments within Rosener” and “Koss is demanding a showing of bodily incorporation.” Director Br. at 24–25. Neither of these assertions withstands scrutiny. Petitioner did not characterize its modified Figure 5 as a mere illustration or example. Instead, Petitioner invoked a specific, bodily incorporation of Rosener’s disparate embodiments by characterizing the modified Figure 5 as “a modified version of Figure 5 showing a configuration of earphones 502, 504 including the earloops disclosed in Rosener ...” Appx242; *see also* Appx1295, ¶ 84. The Petition did not allow that any other configurations were contemplated or

needed for consideration.

B. *In re Jolley* is Not Applicable

The Director is incorrect that even if Koss’s reading of Rosener is plausible, this Court must still affirm under the substantial evidence standard in light of *In re Jolley*, 308 F.3d 1317, 1329 (Fed. Cir. 2002). Director Br. at 23–24. *Jolley* does not apply here. *Jolley* involved an interference proceeding where the Board of Patent Appeals and Interferences (BPAI) granted priority of invention to the “McGraw” inventors. *Jolley*, 308 F.3d at 1320. The BPAI found priority of invention in a May 20, 1988 email among the McGraw inventors, which email encompassed some materials—esters—that were within the interference count and some that were outside. *Id.* at 1321–22. The issue was whether the idea expressed in the email was sufficiently developed to support conception of the subject matter of the interference count. *Id.* at 1324. One of the reasons that the BPAI found that the subject matter of the interference count was sufficiently developed was that, after the email, the McGraw inventors began testing with esters within the count, which could have been a fortuitous coincidence or, alternatively, as the BPAI concluded, objective evidence that the conception was complete. *Id.* at 1325–26. The Federal Circuit explained that it could not “second-guess” the BPAI’s interpretation of the facts under the substantial evidence standard. *Id.* at 1326.

Jolley is not applicable here because there are no facts where Rosener

“expressly describes” earbuds with curved hanger bars. *See* Appx23. As the Director implicitly acknowledged, a grammatically technical reading of Rosener shows that Rosener only associates an earloop with an earphone that goes *on*—not in—the user’s ear. Director Br. at 16 (asserting that Koss’s reading of the “express disclosure” of Rosener as being based on a “grammatical technicality”). The Board did not find that Rosener intimates or suggests earbuds with hanger bars. Instead, the Board found that Rosener “expressly describes” earbuds with curved hanger bars, but no plausible interpretation of Rosener’s literal words support that conclusion, thereby making *Jolley* inapplicable here.

II. THE BOARD’S DETERMINATION THAT CLAIM 1 OF THE ’982 PATENT IS UNPATENTABLE RESULTED FROM NON-HARMLESS LEGAL AND FACTUAL ERRORS

This Court should overturn the Board’s determination that claim 1 of the ’982 Patent is unpatentable. The Board relied on testimony from Cooperstock that no reasonable mind would accept as adequate. Additionally, the Board relied on inapplicable cases, particularly *In re Keller* and *In re Epstein*, to minimize the relevance of Cooperstock’s testimony (and the testimony of Koss’s expert, McAlexander) that showed that a POSITA would not have had a reasonable expectation of success to realize claim 1 in light of the relied-upon references.

A. No Reasonable Mind Would Accept the Evidence Relied Upon by the Board as Adequate to Support the Board's Determination that Claim 1 of the '982 Patent is Unpatentable

Koss's opening brief explained how the Board made both legal and factual errors in concluding that claim 1 of the '982 Patent would have been obvious. A legal error was the Board's reliance on *In re Keller*, 642 F.2d 412 (C.C.P.A. 1981). OB at 44–46. The factual errors included (i) that Rosener includes the same level of disclosure as the '982 Patent, which factual determination led to the Board's erroneous application of *In re Epstein*, 32 F.3d 1559 (Fed. Cir. 1994) and (ii) the Board's determination that the challenged claims do not include limitations regarding design and operability, which impacted the Board's analysis under *Keller*. OB at 47–49. Koss's opening brief also explained why those errors were non-harmless. The errors allowed the Board to discount Cooperstock's testimony that demonstrated that claim 1 was beyond the reach of a POSITA, particularly a "Baseline POSITA,"² who qualifies as a POSITA according to the Board and Petitioner. OB at 50–52.

As described in Koss's opening brief, Petitioner's expert, Cooperstock, could not explain many of the components in the relied-upon references,

² As explained in Koss's opening brief, a "Baseline POSITA" is a person that has only a bachelor's degree in computer science and two years of experience in short-distance wireless communication or local area networks, with no skills or experience specific to sound engineering or wireless headphone technology. OB at 23.

particularly Rosener and Hankey. For example, Cooperstock could not explain how the speaker elements in Rosener operate, how Rosener's circuitry accounts for timing latencies in the data streams to the independently wireless earphones, and what a suitable material for the flexible connectors in Hankey could be. OB at 24–26, 44. The Director offers several facts, including testimony from Cooperstock, that allegedly support the Board's determination that a POSITA would have had a reasonable expectation of success, but the record facts are insufficient to support the Board's determination.

First, as to the headphones' acoustic transducers, the Director notes that Cooperstock testified that “[w]e ... have lots and lots of experience, decades worth, in that sort of technology” and that the skilled artisan “who is seeking to implement that technology would ... have available many references to describe the operation of such an element.” Director Br. at 28 (citing Appx8718 at 38–39). Other testimony from Cooperstock, however, undercut his unsupported assertions such that no reasonable person would accept the unsupported assertions as adequate to support the Board's determination. Cooperstock's testimony was that a POSITA (such as a Baseline POSITA) need not have experience with sound engineering or wireless headphone technology. Instead, according to Cooperstock, a Baseline POSITA might just have minimal experience (two years' worth) with short-distance wireless communication or local area networks. Appx5529

(Cooperstock's testimony about the skill level of a POSITA for the '982 Patent). Such a POSITA "would not necessarily have skills or knowledge specific to designing the acoustic transducer for a wireless earphone, fitting all of the components into a small form factor earphone, or suitably powering a wireless earphone given the safety and size constraints" and "experience with short distance wireless communications and LANs would not necessarily translate to experience involving acoustics, wireless headphone or wireless speakers." Appx8829, ¶ 20 (McAlexander testimony).

Proving that a POSITA would not necessarily understand acoustics for earphones, Cooperstock could not explain how any of the speaker elements (e.g., acoustic transducers) in Rosener operate or how they compare to one another. Appx8716–8722. Cooperstock's lack of knowledge about acoustic transducers undercuts his testimony that a POSITA would not have "lots of experience" with acoustic transducers, such that no reasonable person would accept Cooperstock's testimony as adequate to support the Board's determination. The fact that Cooperstock, whose education and experience greatly exceeds the education and experience of a Baseline POSITA, could not explain how the acoustic transducers in Rosener operate demonstrates that a person of lesser education and irrelevant experience (e.g., a Baseline POSITA) would have little hope of understanding how they operate and would have little hope of success realizing the invention of claim

1 from the relied upon references (i.e., Rosener and Hankey for Ground 1(A), plus Dyer for Ground 1(A)(i)). Appx8844, ¶ 47 (McAlexander testifying that Petitioner’s proposed combinations for claim 1 “would require detailed knowledge of and experience with the components utilized by the wireless headsets disclosed in Rosener and Hankey, beyond the capabilities of a POSITA”).

Second, the Director relies on misquoted testimony from Koss’s expert, McAlexander, that, allegedly, prior to the ’982 Patent, information detailing the properties, characteristics, and uses of the various transducer types described in Rosener was “publically available.” Director Br. at 28 (citing Appx7616–7618). McAlexander only testified that Rosener’s acoustic transducer types were “commercially available” and that there “was information” about them. Appx7617–7618. He did not testify that information about the acoustic transducer types was “publically available.” Nor is it clear whether McAlexander was testifying about acoustic transducers in general or in the context of wireless earphones, which are the subject of the challenged claims. Further, McAlexander’s testimony was from his own “[k]nowledge of working with acoustics and these types of transducers.” Appx7617. Because McAlexander’s experience exceeds that of a Baseline POSITA, particularly because he possessed “intimate experience with sound and lighting systems” and was “very familiar with how acoustic speakers operate ...” (Appx8823, ¶ 9; Appx8829, ¶ 20), the

testimony cited by the Director fails to adequately support the Board's finding. *See also* Appx8844, ¶ 47 (McAlexander testifying that claim 1 was "beyond the capabilities of a POSITA").

Third, the Director relies on Cooperstock's testimony that "[f]lexible circuit board[s] were commercially available" prior to the '982 Patent and that a skilled artisan "could simply select from the commercially available flexible circuit boards without needing to know the underlying material used in fabricating flexible circuit boards." Director Br. at 28–29 (citing Appx7401–7402). However, no reasonable person would accept Cooperstock's testimony as adequate to support the Board's determination. Despite his superior education and experience, Cooperstock could not identify a single material that would have been suitable for the flexible connectors (Appx8746), even though the materials were, according to Cooperstock, "prevalent." Appx7402, ¶ 21. It defies logic that a person of Cooperstock's education and experience could not identify a single suitable material for the flexible connectors even through the materials were allegedly prevalent.

Finally, the Director seeks to minimize Cooperstock's evasive testimony as him being "hesitant to provide an off-the-cuff, detailed technical response" to cross-examination questioning that was, allegedly, "both irrelevant to the case at hand and beyond the scope of his expert declaration." Director Br. at 30, 32. The

questioning, however, did not concern irrelevant topics but rather was a fair and rigorous examination concerning topics that are described in the prior art described in Cooperstock's declaration and that are necessary for operative wireless earphones. Wireless earphones require acoustic transducers, e.g., speaker elements (*see* Appx8846, ¶ 50), yet Cooperstock could not explain how any of Rosener's speaker elements operate or compare them to one another. Appx8716–8722. Petitioner's Grounds 1(A) and 1(A)(i) also both relied on Hankey's flexible connectors (*see* Petition, Appx4457; Cooperstock Dec., Appx5543–5544, ¶ 46), yet Cooperstock testified puzzlingly that questions about the materials for the connectors were “beyond the scope of the case.” Director Br. at 31 (citing Appx8746).

Rosener also discloses an A/D converter and corresponding buffer to compensate for the timing differences between the independent, wireless data streams for the true wireless earphones, which Rosener acknowledges is a “concern, particularly in applications where the data packets comprise audio data.” Appx1420–1421, ¶¶ [0038]–[0039]. Despite this specific concern enunciated in Rosener directed to making operative wireless earphones for audio, Cooperstock was unable to provide a technologically sound interpretation of Rosener's analog-to-digital converter and corresponding buffer. Appx8725; Appx8729; Appx8739. Indeed, Cooperstock could not even define the term “analog sub-carrier signal”

used in one of Rosener’s techniques for addressing the timing differences in the independently wireless data streams (Appx8734), even though, according to Cooperstock, the topic went to the “fundamentals of RF communication” that was allegedly “well-known to a POSITA at the time.” Director Br. at 31 (quoting Appx8734–8735). If a Ph.D. in Electrical and Computer Engineering with decades of experience (*see* Appx5516–5518, ¶¶ 7–11; Appx5632–5635) could not explain topics that are “fundamental to RF communications,” a Baseline POSITA, with inferior educational and experience levels, would have little expectation of success making the relied-upon combination of Rosener and Hankey (and Dyer for Ground 1(A)(i)). *See* Appx8843–8850, ¶¶ 46–56.

No reasonable mind would accept Cooperstock’s testimony as adequate to support the Board’s determination that a POSITA would have had a reasonable expectation of success in making the proposed combinations for claim 1.

B. The Board Committed Legal Error in its Application of *In re Keller*

The Director is incorrect that the Board merely cited *In re Keller*, 642 F.2d 412 (C.C.P.A. 1981) for the “uncontroversial proposition that the obviousness analysis is not based on bodily incorporation” Director Br. at 35. The Board instead relied on *Keller*’s admonition against bodily incorporation argument to reject Koss’s argument “[i]n sum.” Appx87. The Board’s reliance on *Keller* is inappropriate, and legal error, because Koss did not argue a bodily incorporation

theory against Petitioner’s proposed combinations for claim 1. Koss instead argued below that the combination was beyond the skill level of a POSITA, as evidenced by Cooperstock’s testimony. OB at 45–46. Consequently, *In re Keller* does not apply.

The Board’s justification for relying on *Keller*—that the claims do not including limitations regarding design and operability (Appx87)—was also erroneous. Claim 1 specifically recites that each wireless earphone comprises a body portion, and that the body portion comprises each of (i) a wireless communication circuit, (ii) a processor circuit, (iii) an ear canal portion, and (iv) an acoustic transducer. Appx194, 18:16–24. Further, the elongated portion extends downwardly away from the body portion. *Id.*, 18:25–28. Thus, the claimed wireless earphones require a very specific form factor design. The body portion’s circuitry further provides operability for the wireless earphones; each earphone “receives and plays audio content received wireless via the Bluetooth wireless communication links from the mobile, digital audio player.” *Id.*, 18:34–40. In light of these detailed limitations related to the design and operability of the claimed wireless earphones, no reasonable mind would accept the Board’s finding that the claims lack limitations regarding design and operability.

The Director is also incorrect that Koss did not explain how the Board’s erroneous reliance on *Keller* tainted the Board’s interpretation of the relevant facts.

Director Br. at 35. Koss’s opening brief addressed how the Board’s error was non-harmless at pages 50–52, which explained that the Board’s reliance on *Keller* (as well as *In re Epstein*) allowed the Board to ignore Cooperstock’s testimony, which demonstrated that there would not have been a reasonable expectation of success for a POSITA, including a Baseline POSITA, to arrive at claim 1. OB at 50.

Thus, a legal error by the Board—its reliance on *Keller*—allowed the Board to dismiss Cooperstock’s testimony that demonstrated that the challenged claims would not have been obvious. If the Board had not committed the legal error and, consequently, considered Cooperstock’s testimony, the Board would have found that Petitioner had not proven claim 1 unpatentable because the testimony from each party’s experts showed that important concepts for making operative wireless earphones were beyond the reach of a POSITA, particularly a Baseline POSITA.

Id.

Consequently, the Board’s reliance on *In re Keller* was non-harmless legal error.

C. The Factual Record Does Not Support the Board’s Reliance on *In re Epstein*

In re Epstein stands for the proposition that a prior art reference is enabling if it has at least the same level of disclosure as the challenged patent. 32 F.3d 1559, 1568 (Fed. Cir. 1994). The Board applied *Epstein* because, according to Board, the ’982 Patent has “the same level of disclosure” as Rosener. Appx87.

Koss’s opening brief, however, explained that the ’982 Patent, in contrast to Rosener, discloses crucial teachings that enable small form factor wireless headphones, such as integrating internal electronics of the earphones into a system-on-chip (SOC) contained in the body portion of the earphone. OB at 47–48 (citing Appx188, 6:49–54).

The Director did not dispute that the ’982 Patent includes this disclosure and that Rosener does not. Nor did the Director dispute that the disclosure in the ’982 Patent is significant—that employing an SOC “is conducive to miniaturizing the components of the earphone, which is advantageous if the earphone is to be relatively small in size” Appx188, 6:49–54. Thus, there is no dispute that Rosener lacks the same level of disclosure as the ’982 Patent; and no reasonable person would accept the Board’s determination that they have the same level of disclosure as adequate to support the Board’s application of *Epstein* here.

The Director makes two arguments to minimize the Board’s factually erroneous reliance on Rosener’s level of disclosure relative to the ’982 Patent, but neither argument is availing. **First**, the Director criticized the brevity of the ’982 Patent—that the ’982 Patent made this important disclosure in “a six-line passage” Director Br. at 33. The Director, however, did not cite any case law that supports that the additional disclosure in the challenged patent has be a certain, minimum length. Indeed, detailed procedures for making and using a claimed

invention are not necessary if the description of the invention itself is sufficient to permit those skilled in the art to make and use the invention. *See CFMT, Inc. v. Yieldup Int'l Corp.*, 349 F.3d 1333, 1338, 68 USPQ2d 1940, 1944 (Fed. Cir. 2003) (an invention directed to a general system to improve the cleaning process for semiconductor wafers was enabled by a disclosure showing improvements in the overall system).

Second, the Director focuses on Hankey's disclosure instead of Rosener's. Director Br. at 34. However, the Board did not consider Hankey in its *Epstein* analysis (Appx87) and neither should this Court. Neither Petitioner nor its expert, Cooperstock, relied on Hankey's SOC disclosures. Consequently, for good reason, the suitability of Hankey's SOC in Rosener's form factor was not litigated in the IPR. Hankey discloses only a single-earpiece headset, not a set of headphones comprising independently wireless earphones, like claim 1. Appx5784, ¶ [0093] (Hankey's "headset can be embodied as a small compact unit including a primary housing and an earbud member extending therefrom"); Appx8842, ¶ 45 (McAlexander testifying that "Hankey discloses a single-earpiece headset ..."). Thus, the Director oversimplified the record by asserting that "Hankey includes significant details about ways to minimize the size and weight of the earphones [plural] for the users' benefit" (Director Br. at 36) because Hankey disclosed a single-earpiece headset only. To that end, like Rosener, Hankey does not have the

same level of disclosure as the '982 Patent because Hankey, like Rosener, fails to disclose an SOC in each of two independently wireless earphones.

Consequently, the Board made factual errors in order to analogize this case to *Epstein*. The errors were harmful to Koss because the Board's reliance on *Epstein* it allowed the Board to ignore the expert testimony that showed that claim 1 is nonobvious under the asserted grounds.

III. CONCLUSION

For the foregoing reasons and the reasons set forth in Appellant's Opening Brief, the Court should reverse the Board's findings that (i) claims 1–4, 9, 10, and 14–17 of the '325 Patent are unpatentable and (ii) claims 1–5 and 14–18 of the '982 Patent are unpatentable.³

³ There are updates to the Statement of Related Cases in Koss's opening brief. *See* OB at 1. Cross appeals have been filed for the appeals for involving Patent No. 10, 206,025 and Patent No. 10,469,934. *See* Case Nos. 2023–1180 and 2023–1191, respectively. The Federal Circuit consolidated the appeals and cross-appeals involving these two patents. *See* Case No. 2023–1173, Dkt. 10 (Fed. Cir. Dec. 5, 2022). Additionally, the Federal Circuit ordered that the following appeals be treated as companion cases and assigned to the same merits panel as the present appeal: Case Nos. 2022–2090, 2023–1173, 2023–1179, 2023–1180 and 2023–1191. *See* Case No. 2022–2090, Dkt. 16 (Fed. Cir. Dec. 20, 2022).

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Respectfully submitted,

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**UNITED STATES COURT OF APPEALS FOR
THE FEDERAL CIRCUIT**

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